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| **UNIT 5: STATES OF CONSCIOUSNESS** |

**CONSCIOUSNESS AND INFORMATION PROCESSING**

**OBJECTIVE 1: Discuss the history of psychology’s study of consciousness, and contrast conscious and unconscious** **information processing**

1. The study of \_\_\_**CONSCIOUSNESS**\_\_\_\_\_ was central in the early years of psychology and in recent decades, but for quite some time it was displaced y the study of observable \_\_\_**BEHAVIOR**\_\_\_\_.
2. Advances in neuroscience made it possible to relate \_\_\_**BRAIN**\_\_\_\_\_ \_\_\_**ACTIVITY**\_\_\_ to various mental states; as a result \_\_\_\_**MENTAL**\_\_\_\_\_ \_\_\_**CONCEPTS**\_\_ began to reenter psychology.

Define consciousness in a sentence.

**CONSCIOUSNESS IS OUR AWARENESS OF OURSELVES AND OUR ENVIORNMENT**

1. Asked to press a button when they feel a tap, people respond \_\_\_\_**BEFORE**\_\_\_\_ (before/after) they become conscious they have responded. In comparison with unconscious processing, conscious processing has a(n) \_\_**LIMITED**\_\_\_\_ (limited/unlimited) capacity, is relatively \_\_\_**SLOW**\_\_\_\_\_ (fast/slow), and processes pieces of information \_\_\_\_**SUCCESSIVELY**\_\_\_(successively/serially).
2. Novel tasks \_\_\_**REQUIRE**\_\_\_\_ (require/ do not require) conscious attention.

**SLEEP AND DREAMS**

**OBJECTIVE 2: Distinguish four types of biological rhythms, and give an example of each.**

1. Our bodies’ internal “clocks” control several \_\_\_**BIOLOGIAL**\_\_\_ \_\_\_**RHYTHMS**\_\_\_. Among these are \_\_**ANNUAL**\_\_\_\_ \_\_\_**CYCLES**\_\_\_\_, which may give rise to seasonal variations in \_\_\_**APPETITE, SLEEP LENGTH AND MOODS**\_\_\_\_\_\_\_\_.
2. Some people, especially those in far northern regions, may experience a depressed winter mood called a \_\_**SEASONAL**\_\_\_\_ \_\_\_**AFFECTIVE**\_\_\_ \_\_\_**DISORDER**\_\_\_. We may also experience cycles lasting \_\_**28**\_\_\_\_\_ days, such as the female \_**MENSTRUAL**\_\_\_\_ \_\_**CYCLE**\_\_; \_\_\_**24**\_\_\_-hour cycles of varying \_\_\_\_**ALERTNESS, BODY TEMPERATURE, AND GROWTH HORMONE SECRETION**\_\_; and \_\_**90**\_\_\_ minute cycles, such as the various stages of sleep.

**OBJECTIVE 3: Describe the cycle of our circadian rhythm, and identify some events that can disrupt this biological clock.**

1. The sleep-waking cycle follows a 24-hour clock called the \_\_**CIRCADIAN**\_\_\_ \_\_**RHYTHM**\_\_.
2. When people are at their daily peak in circadian arousal, \_\_**THINKING**\_\_\_\_ is sharpest and \_\_**MEMORY**\_\_\_ is

most accurate. In contrast to university students, who often are at their peak in the \_\_**EVENING**\_\_ (morning/evening), older adults tend to peak in the \_\_\_**MORNING**\_\_\_\_\_.

1. We may experience \_\_\_**JET**\_\_\_ \_\_\_**LAG**\_\_\_\_ if our circadian rhythm is interrupted by travel across time zones. Our circadian rhythm may also be interrupted by \_\_**TIME**\_\_\_ changes, such as the one that occurs in the spring in many areas, and by work \_\_\_**SHIFTS**\_\_\_.
2. Resetting of a disrupted biological clock is facilitated by exposure to \_\_**BRIGHT**\_\_\_\_ \_\_**LIGHT**\_\_\_, which triggers proteins in the \_\_\_**RETINAS**\_\_\_\_ of the eyes to signal the brain’s \_\_\_**PINEAL**\_\_\_\_\_ gland to increase or decrease its production of \_\_**MELATONIN**\_\_\_\_. The cluster of cells called the \_\_**SUPRACHIASMATIC**\_\_\_ \_\_**NUCLEUS**\_\_\_controls the circadian clock. The longer we remain awake, the more our brains accumulate \_\_**ADENOSINE**\_\_\_\_, which tends to \_\_\_**INHIBIT**\_\_\_\_\_ certain neurons and make us sleepy. We can also reset our biological clocks by adjusting our \_\_\_**SLEEP**\_\_\_ \_\_**SCHEDULES**\_\_\_.

**OBJECTIVE 4: List the stages of the sleep cycle, and explain how they differ.**

1. The sleep cycle consists of \_\_\_**5**\_\_\_\_\_ distinct stages.
2. The rhythm of sleep cycles was discovered when Aserinsky noticed that, at periodic intervals during the night, the \_\_**EYES**\_\_\_\_ of a sleeping child moved rapidly. This stage of sleep, during which \_\_\_\_**DREAMS**\_\_\_\_ occur, is called \_\_\_**REM**\_\_\_\_ \_\_**SLEEP**\_\_.
3. The relatively slow brain waves of the awake but relaxed state are known as \_\_\_\_**ALPHA**\_\_\_ waves.
4. During Stage 1 sleep, people often experience \_\_**HYPNAGOGIC**\_\_\_\_ sensations similar to \_\_**HALLUCINATIONS**\_\_\_. These sensations may later be incorporated into \_\_\_**MEMORIES**\_\_\_.
5. The bursts of brain-wave activity that occur during Stage 2 sleep are called \_\_**SLEEP**\_\_\_\_ \_\_\_**SPINDLES**\_\_\_.
6. Large, slow brain waves are called \_\_\_\_**DELTA**\_\_\_\_\_ waves. First in Stage \_\_\_**3**\_\_\_\_, and increasingly during Stage \_\_**4**\_\_\_ sleep, which are therefore called \_\_**SLOW**\_\_ - \_\_**WAVE**\_\_\_ sleep. A person in the latter stage of sleep generally will be \_\_\_**DIFFICULT**\_\_\_\_ (easy/difficult) to awaken. It is during this stage that people may engage in sleep \_\_**WALKING**\_\_\_.

Describe the bodily changes that accompany REM sleep.

**DURING REM SLEEP, BRAIN WAVES BECOME AS RAPID AS THOSE OF STAGE 1 SLEEP, HEART RATE AND BREATHING BECOME MORE RAPID AND IRREGULAR, AND GENITAL AROUSAL AND RAPID EYE MOVEMENTS OCCUR.**

1. During REM sleep, the motor cortex is \_\_\_**ACTIVE**\_\_\_ (active/relaxed), while the muscles are \_\_**RELAXED**\_\_\_ (active/relaxed). For this reason, REM sleep is often referred to as \_\_\_**PARADOXICAL**\_\_\_ sleep.
2. The rapid eye movements generally signal the beginning of a \_\_**DREAM**\_\_\_\_. PET scans reveal heightened activity in the \_\_**VISUAL**\_\_\_ and \_\_\_**AUDITORY**\_\_\_\_ areas of the brain during REM sleep.
3. The sleep cycle repeats itself about every \_\_**90**\_\_\_\_ minutes. As the night progresses, Stage 4 sleep becomes \_\_**BRIEFER**\_\_\_ (longer/briefer) and REM periods become \_\_\_**LONGER**\_\_\_ (longer/briefer). Approximately \_\_**20-25**\_\_\_ percent of a night’s sleep is spent in REM sleep.

**OBJECTIVE 5: Explain why sleep patterns and duration vary from person to person**

1. Newborns spend nearly \_\_**TWO-THIRDS**\_\_\_\_ (how much?) of their day asleep, while adults spend no more than \_\_**ONE-THIRD**\_\_\_.
2. Sleep patterns are influenced by \_**GENES**\_\_\_, as indicated by the fact that sleep patterns among \_\_**IDENTICAL**\_\_\_\_\_ (identical/fraternal) twins are very similar. Sleep is also influenced by \_\_\_**CULTURE**\_\_\_\_.
3. Allowed to sleep uninhindered, most people will sleep 9 hours a night. People who sleep less than that for several nights in a row will often show signs of \_\_\_**SLEEP**\_\_\_\_\_ \_\_\_**DEPRIVATION**\_\_.

**OBJECTIVE 6:**

**Discuss several risks associated with sleep deprivation.**

1. Teenagers typically need \_\_**8 OR 9**\_\_\_\_ hours of sleep but now average nearly \_\_\_**2**\_\_\_\_\_\_ hours less sleep than teenagers of 80 years ago. To psychologist William \_\_**DEMENT**\_\_\_, this indicates that the vast majority of students are dangerously sleep-deprived. One indication of the hazards of this state is that the rate of \_\_**ACCIDENTS**\_\_\_\_ tends to increase immediately after the spring time change in Canada and the United States. Another is that sleep deprivation may suppress the body’s \_\_**IMMUNE**\_\_\_ system and alter metabolic and hormonal functioning in ways that mimic \_\_\_**AGING**\_\_\_\_ and are conducive to \_\_\_**OBESITY**\_\_\_, \_\_\_**HYPERTENSION**\_\_, and \_\_\_**MEMORY**\_\_\_\_ \_\_\_**IMPAIRMENT**\_\_\_\_.

Describe the effects of sleep deprivation.

**ONE MAJOR EFFECT OF SLEEP DEPRIVATION IS SLEEPINESS. OTHER EFFECTS INCLUDE IMPAIRED CREATIVITY, CONCENTRATION, AND COMMUNICATION; SLOWED PERFORMANCE; AND IRRITABITLITY**

**OBJECTIVE 7: Identify four theories of why we sleep.**

1. Two possible reasons for sleep are to \_\_\_**PROTECT**\_\_\_\_ us and to help restore body tissues, especially those of the \_\_\_**BRAIN**\_\_\_. Animals with high waking \_\_**METABOLISM**\_\_\_ produce an abundance of chemical \_\_\_**FREE**\_\_\_\_ \_\_\_**RADICALS**\_\_\_that are toxic to \_\_**NEURONS**\_\_\_\_. Sleep also facilitates our \_\_\_**MEMORY**\_\_\_\_ of the day’s experiences and stimulates \_\_\_\_\_**CREATIVE**\_\_\_ thinking.
2. During sleep a growth hormone is released by the \_\_**PITUITARY**\_\_\_ gland. Adults spend \_\_\_**LESS**\_\_\_\_ (more/less) time in deep sleep than children and so release \_\_\_**LESS**\_\_\_\_ (more/less) growth hormone.

**OBJECTIVE 8: Identify the major sleep disorders**

1. A persistent difficulty in falling or staying asleep is characteristic of \_\_\_\_**INSOMNIA**\_\_\_. Sleeping pills and alcohol may make the problem worse since they tend to \_\_\_**REDUCE**\_\_\_\_ (increase/decrease) REM sleep.
2. The sleep disorder in which a person experiences uncontrollable sleep attacks is \_\_**NARCOLEPSY**\_\_\_. People with this disorder may collapse directly into \_\_**REM**\_\_\_\_ sleep and experience a loss of \_\_\_**MUSCULAR**\_\_\_\_ \_\_\_**TENSION**\_\_\_. The brains of people with this disorder lack a neural center in the \_\_\_**HYPOTHALAMUS**\_\_\_ that produces the neurotransmitter \_\_\_**HYPOCRETIN**\_\_\_.
3. Individuals suffering from \_\_\_**SLEEP**\_\_\_ \_\_**APNEA**\_\_ stop breathing while sleeping. This disorder is especially prevalent among \_\_**OVERWEIGHT**\_\_\_\_ \_\_**MEN**\_\_\_.
4. The sleep disorder characterized by extreme fright and rapid heartbeat and breathing is called \_\_**NIGHT**\_\_\_ \_\_**TERRORS**\_\_\_. Unlike nightmares, these episodes usually happen early in the night, during Stage \_\_**4**\_\_\_ sleep. The same is true of episodes of \_\_**SLEEPWALKING**\_\_\_ and \_\_\_**SLEEPTALKING**\_\_\_\_, problems that \_\_\_**RUN**\_\_\_ (run/do not run) in families. These sleep episodes are most likely to be experienced by \_\_**YOUNG CHILDREN**\_\_\_ (young children/adolescents/older adults), in whom this stage tends to be the \_\_**LENGTHIEST**\_\_\_\_ and \_\_\_**DEEPEST**\_\_\_.

**OBJECTIVE 9: Describe the most common content of dreams.**

1. Dreams experienced during \_\_\_**REM**\_\_\_\_\_ sleep are vivid, emotional, and bizarre. During \_\_**LUCID**\_\_\_\_ dreams, the dreamer may be sufficiently aware to wonder whether he or she is, in fact, dreaming.
2. For both men and women, 8 in 10 dreams are marked by \_\_**NEGATIVE**\_\_\_ (positive/negative) emotions, such as fears of being \_\_\_\_\_\_**ATTACKED, PURSUED OR REJECTED**\_\_\_\_\_.
3. Although females tend to dream equally often about males and females, males tend to dream more about \_**\_\_MALES**\_\_\_\_. This gender difference \_\_**IS**\_\_\_\_ (is/is not) found in cultures worldwide.

**OBJECTIVE 10: Compare the major perspectives on why we dream.**

1. Freud referred to the actual content of a dream as its \_\_**MANIFEST**\_\_ content. Freud believed that this is a censored, symbolic version of the true meaning, or \_**LATENT**\_\_\_ \_\_**CONTENT**\_\_\_, of the dream.
2. According to Freud, most of the dreams of adults reflect \_\_\_\_**EROTIC**\_\_\_\_\_ wishes and are the key to understanding their inner \_\_\_**CONFLICTS**\_\_\_\_.
3. Freud’s theory has given way to the theory that dreams serve an \_\_\_**INFORMATION**\_\_\_-processing function. Support for this theory is provided by the fact that REM sleep facilitates \_\_\_**MEMORY**\_\_\_\_\_.
4. Other theories propose that dreaming serves some \_\_\_**PHYSIOLOGICAL**\_\_\_\_ function, for example, that REM sleep provides the brain with needed \_\_\_**STIMULATION**\_\_\_. Such an explanation is supported by the fact that \_\_\_\_**INFANTS**\_\_\_\_\_ (infants/adults) spend the most time in REM sleep.
5. Still other theories propose that dream are elicited by random bursts of \_\_\_**NEURAL**\_\_\_ activity originating in lower regions of the brain, such as the \_\_\_**BRAINSTEM**\_\_\_\_. According to the \_\_**ACTIVATION**\_\_ - \_\_**SYNTHESIS**\_\_\_ theory, dreams are the brain’s attempt to make sense of this activity. The bursts are believed to be given their emotional tone by the brain’s \_\_**LIMBIC**\_\_ system, especially the \_\_**AMYGDALA**\_\_. Other theorists see dreams as a natural part of brain \_\_\_**MATURATION**\_\_\_ and \_\_**COGNITIVE**\_\_\_ development.
6. Researchers agree that we \_\_**NEED**\_\_\_\_\_ (need/do not need) REM sleep. After being deprived of REM sleep, a person spends more time in REM sleep; this is the \_\_**REM**\_\_\_\_\_ \_\_\_**REBOUND**\_\_\_ effect.
7. REM sleep \_\_\_\_\_\_**DOES**\_\_\_\_\_\_ (does/does not) occur in other mammals. Animals such as fish, whose behavior is less influenced by learning, \_\_\_**DO NOT**\_\_\_ (do/do not) dream. This finding supports the \_\_\_**INFORMATION**\_\_\_\_ - \_\_**PROCESSING**\_\_\_ theory of dreaming.

**HYPNOSIS**

**OBJECTIVE 11: Define *hypnosis*, and note some similarities between the behavior of hypnotized people and that of motivated unhypnotized people.**

1. Hypnosis is a \_\_**SOCIAL**\_\_\_\_\_ \_\_**INTERACTION**\_\_\_ in which a hypnotist suggests that a subject will experience certain feelings or thoughts, for example. Its discovery is attributed to \_\_\_\_\_**MESMER**\_\_\_\_\_\_, who claimed to have discovered an “\_\_**ANIMAL**\_\_\_\_ \_\_**MAGNETISM**\_\_\_.”
2. The weight of research evidence suggests that hypnosis \_\_\_\_**DOES NOT**\_\_\_\_\_ (does/does not) allow a person to perform feats that are impossible in the normal waking state. The strength, stamina, learning, and perceptual abilities of hypnotized people \_\_**ARE**\_\_\_ (are/are not) like those of motivated unhypnotized people.

**OBJECTIVE 12: Discuss the characteristics of people who are susceptible to hypnosis, and evaluate claims that hypnosis can influence people’s memory, will, health, and perception of pain.**

1. Most people are \_\_\_**SOMEWHAT**\_\_\_\_ (somewhat/not at all) hypnotically suggestible.

Describe people who are the most susceptible to hypnosis.

**THOSE WHO ARE MOST SUSCEPTIBLE FREQUENTLY BECOME DEEPLY ABSORBED IN IMAGINATIVE ACTIVITIES. THEY ALSO TEND TO HAVE RICH FANTASY LIVES.**

1. If people are led to expect that they are hypnotizable, their responsiveness under hypnosis \_\_**WILL**\_\_\_\_ (will/will not) increase.
2. The hypnotic demonstration in which a subject supposedly relives earlier experiences is referred to as \_\_\_**AGE**\_\_\_ \_\_**REGRESSION**\_\_. Research studies show that the subjects in such demonstrations have memories that are \_\_**NO MORE**\_\_\_\_ (more/no more) accurate than the memories of fully conscious people.
3. An \_\_**AUTHORITATIVE**\_\_\_\_ person in a legitimate \_\_\_**CONTEXT**\_\_\_\_ can induce people – hypnotized or not – to perform some unlikely acts.
4. Hypnotherapists have helped some people alleviate headaches, asthma, and stress-related skin disorders through the use of \_\_\_**POSTHYPNOTIC**\_\_\_ suggestions.
5. For \_\_\_**ADDICTIONS**\_\_\_\_\_ such as smoking and drug use, a subject’s hypnotic responsiveness \_\_\_**DOES NOT**\_\_\_ (does/does not) make a difference in the effectiveness of hypnosis.
6. One statistical digest showed that hypnosis \_\_\_**IS**\_\_\_\_\_ (is/is not) especially helpful for the treatment of obesity.
7. Hypnosis \_\_**CAN**\_\_\_\_\_ (can/cannot) relieve pain. One theory of hypnotic pain relief is that hypnosis separates, or \_\_**DISSOCIATES**\_\_\_, the sensory and emotional aspects of pain. Another is that hypnotic pain relief is due to selective \_\_**ATTENTION**\_\_\_, that is, to the person’s focusing on stimuli other than pain.
8. PET scans show that hypnosis reduces brain activity in a region involved in \_\_\_**ATTENDING**\_\_\_\_ to painful stimuli, but not in the \_\_**SENSORY**\_\_\_ cortex that receives the raw \_\_**SENSORY**\_\_\_\_ input.

**OBJECTIVE 13: Give arguments for and against hypnosis as an altered state of consciousness.**

1. Skeptics believe that hypnosis may reflect the workings of \_\_**NORMAL**\_\_\_ \_\_\_**CONSCIOUSNESS**\_\_. These findings provide support for the \_\_\_\_**SOCIAL INFLUENCE**\_\_\_\_ theory of hypnosis.

Summarize the argument that hypnosis is not an altered state of consciousness

**THE BEHAVIOR OF HYPNOTIZED SUBJECTS IS NOT FUNDAMENTALLY DIFFERENT FROM THAT OF OTHER PEOPLE. THEREFORE, HYPNOSIS MAY BE MAINLY A SOCIAL PHENOMENON, WITH HYPNOTIZED SUBJECTS ACTING OUT THE ROLE OF A “GOOD HYPNOTIC SUBJECT.”**

1. Hilgard has advanced the idea that during hypnosis there is a \_\_**DISSOCIATION**\_\_, or split, between different levels of consciousness.
2. The existence of a separate consciousness, which is aware of what takes place during hypnosis, is expressed in the concept of the \_\_**HIDDEN**\_\_\_ \_\_**OBSERVER**\_\_\_. Although this theory has provoked controversy, there is little doubt that \_\_\_**SOCIAL**\_\_\_\_ influences do play an important role in hypnosis.

Discuss the current view of hypnosis as a blend of the two views.

**THE SOCIAL INFLUENCE AND DIVIDED CONSCIOUSNESS VIEWS WORK TOGETHER TO EXPLAIN HYPNOSIS AS AN EXTENSION OF NORMAL PRINCIPLES OF SOCIAL INFLUENCE AND OF EVERYDAY DISSOCIATIONS BETWEEN OUR CONSICOUS AWARENESS AND OUR AUTOMATIC BEHAVIORS.**

**DRUGS AND CONSCIOUSNESS**

**OBJECTIVE 14: Define *psychoactive drug.***

1. Drugs that alter moods and perceptions are called \_\_\_**PSYCHOACTIVE**\_\_\_\_ drugs.

**OBJECTIVE 15: Discuss the nature of drug dependence, and identify three common misconceptions about addiction.**

1. Drug users who require increasing doses to experience a drug’s effects have developed \_\_**TOLERANCE**\_\_\_ for the drug. The user’s brain counteracts the disruption to its normal functioning; thus, the user experiences \_\_**NEUROADAPTATION**\_\_\_.
2. After ceasing to use a drug, a person who experiences \_\_**WITHDRAWAL**\_\_\_\_ symptoms has developed a physical \_\_\_**DEPENDENCE**\_\_\_. Regular use of a drug to relieve stress is an example of\_\_**PSYCHOLOGICAL**\_\_ dependence. A person who has a compulsive craving for a substance despite adverse consequences is \_\_**ADDICTED**\_\_\_ to that substance.

Briefly state three common misconceptions about addiction.

**THE FOLLOWING MYTHS ABOUT ADDICTION ARE FALSE:**

1. **TAKING A PSYCHOACTIVE DRUG AUTOMATICALLY LEADS TO ADDICTION**
2. **ONE CANNOT OVERCOME AN ADDICTION WITHOUT PROFESSIONAL HELP**
3. **THE ADDICTION-AS-DISEASE-NEEDING-TREATMENT MODEL IS APPLICABLE TO A BROAD SPECTRUM OF PLEASURE-SEEKING BEHAVIORS.**

**OBJECTIVE 16: Name the main categories of psychoactive drugs, and list three ways these substances can interfere with neurotransmission in the brain.**

1. The three broad categories of psychoactive drugs discussed in the text include \_\_\_**DEPRESSANTS**\_\_\_\_, which tend to slow body functions; \_\_**STIMULANTS**\_\_\_\_, which speed body functions; and \_\_**HALLUCINOGENS**\_\_\_, which alter perception. These drugs all work by mimicking, stimulating, or inhibiting the activity of the brain’s \_\_**NEUROTRANSMITTERS**\_\_\_. Psychologically, our \_\_\_**EXPECTATIONS**\_\_\_ also play a role.

**OBJECTIVE 17: Explain how depressants affect nervous system activity and behavior, and summarize the findings on alcohol use and abuse.**

1. Depressants \_\_\_\_**CALM**\_\_\_\_\_ nervous system activity and \_\_\_**SLOW**\_\_\_\_\_\_ body function. Low doses of alcohol, which is classified as \_\_\_**DEPRESSANT**\_\_\_, slow the activity of the \_\_\_**SYMPATHETIC**\_\_\_ nervous system.
2. Alcohol may make a person more \_\_**AGGRESSIVE**\_\_\_, more \_\_\_**HELPFUL**\_\_\_\_, or more \_\_\_**SEXUALLY**\_\_\_\_ daring. Alcohol affects memory by interfering with the process of transferring experiences into \_\_\_**LONG**\_\_\_ - \_\_\_**TERM**\_\_ memory. Also, blackouts after drinking result from alcohol’s suppression of \_\_\_**REM SLEEP**\_\_\_.
3. Excessive use of alcohol can also affect cognition by \_\_\_**SHRINKING**\_\_\_\_\_\_ the brain, especially in \_\_\_**WOMEN**\_\_\_ (men/women). Alcohol also reduces \_\_**SELF-AWARENESS**\_\_\_ and focuses one’s attention on the \_\_**IMMEDIATE**\_\_ \_\_\_**SITUATION**\_\_ and a way from \_\_**FUTURE**\_\_\_\_ \_\_**CONSEQUENCES**\_\_.

Describe how a person’s expectations can influence the behavioral effects of alcohol.

**STUDIES HAVE FOUND THAT IF PEOPLE BELIEVE THAT ALCOHOL AFFECTS SOCIAL BEHAVIOR IN CERTAIN WAYS, THEN, WHEN THEY DRINK ALCOHOL (OR EVEN MISTAKENLY THINK THAT THEY HAVE BEEN DRINKING ALCOHOL), THEY WILL BEHAVE ACCORDING TO THEIR EXPECTATIONS, WHICH VARY BY CULTURE. FOR EXAMPLE, IF PEOPLE BELIEVE ALCOHOL PROMOTES SEXUAL FEELING, ON DRINKING, THEY ARE LIKELY TO BEHAVE IN A SEXUALLY AROUSED WAY.**

1. Tranquilizers, which are also known as \_**BARBITUATES**\_\_, have effects similar to those of alcohol.
2. Opium, morphine, and heroine all \_\_**DEPRESS**\_\_\_ (excite/depress) neural functioning. Together, these drugs are called the \_**OPIATES**\_\_\_. When they are present, the brain eventually stops producing \_\_\_**ENDORPHINS**\_\_.

**OBJECTIVE 18: Identify the major stimulants, and explain how they affect neural activity and behavior.**

1. The most widely used stimulants are \_\_**CAFFEINE**\_\_, \_\_**NICOTINE**\_\_\_, the \_\_**AMPHETAMINES**\_\_, \_\_\_**COCAINE**\_\_, \_\_\_**ECSTASY**\_\_\_, and \_**METHAMPHETAMINE**\_\_. Stimulants \_\_\_**ARE**\_\_\_ (are/are not) addictive.
2. Cocaine and crack deplete the brain’s supply of the neurotransmitters \_\_**DOPAMINE**\_\_\_, \_\_**NOREPINEPHRINE**\_\_\_\_, and \_\_**SEROTONIN**\_\_, and result in depression as the drugs’ effects wear off. They do this by blocking the \_\_**REUPTAKE**\_\_ of the neurotransmitters, which remain in the nerve cells’ \_\_\_**SYNAPSES**\_\_\_\_.
3. Cocaine’s psychological effects depend not only on dosage and form but also on \_\_**EXPECTATIONS**\_, \_\_\_**PERSONALITY**\_\_\_, and the \_\_\_**SITUATION**\_\_.
4. The drug \_\_\_**ECSTASY**\_\_\_\_\_, or MDMA, is both a \_\_\_**STIMULANT**\_\_\_\_ and a \_**MILD**\_\_\_ \_**HALLUCINOGEN**\_\_\_. This drug triggers the release of neurotransmitters \_\_\_\_**DOPAMINE**\_\_\_\_ and \_\_**SEROTONIN**\_\_\_ and blocks the reabsorption of \_\_**SEROTONIN**\_\_\_. Among the adverse effects of this drug are disruption of the body’s \_\_\_**CIRCADIAN**\_\_ clock, suppression of the \_\_**IMMUNE**\_\_\_\_ \_\_**SYSTEM**\_\_\_\_, and impaired \_\_**MEMORY**\_\_ and other \_\_\_**COGNITIVE**\_\_\_\_ functions.

**OBJECTIVE 19**: **Describe the physiological and psychological effects of hallucinogens, and summarize the effects of LSD and marijuana.**

1. Hallucinogens are also referred to as \_\_\_**PSYCHEDELICS**\_\_\_. Two common synthetic hallucinogens are \_\_\_**MDMA**\_\_\_ and LSD, which is chemically similar to a subtype of the neurotransmitter \_\_\_**SEROTONIN**\_\_\_. LSD works by \_\_\_**BLOCKING**\_\_\_ the actions of this neurotransmitter.
2. The active ingredient in marijuana is abbreviated \_\_\_**THC**\_\_\_. Marijuana is being used therapeutically with those who suffer from \_\_\_**AIDS**\_\_\_. However, these medical uses are complicated by marijuana’s toxicity, which can cause \_\_\_\_\_**CANCER, LUNG DAMAGE, AND PREGNANCY COMPLICATIONS**\_\_\_\_\_.

**LIKE ALCOHOL, MARIJUANA RELAXES, DISINHIBITS, AND MAY PRODUCE A EUPHORIC FEELING. ALSO LIKE ALCOHOL, MARIJUANA IMPAIRS PERCEPTUAL AND MOTOR SKILLS. MARIJUANA IS A MILD HALLUCINOGEN; IT CAN AMPLIFY SENSITIVITY TO COLORS, SOUNDS, TASTES AND SMELLS. MARIJUANA ALSO INTERRUPTS MEMORY FORMATION.**

1. The negative aftereffects of drug use may be explained in part by the principle that emotions trigger \_\_**OPPOSING**\_\_\_ \_\_**EMOTIONS**\_\_\_.

**OBJECTIVE 20: Discuss the biological, psychological, and social-cultural factors that contribute to drug use.**

1. Drug use by North American youth \_**INCREASED**\_\_\_\_ (increased/decreased) during the 1970s, then declined until the early 1990s due to increased \_\_\_**DRUG**\_\_\_\_ \_\_**EDUCATION**\_\_\_\_ and efforts by the media to deglamorize drug use.
2. In the twenty-first century, attitudes toward alcohol \_\_**HAVE**\_\_ (have/have not) changed, with \_\_\_**MORE**\_\_\_\_\_ (more/fewer) people abstaining from drinking.
3. Adopted individuals are more susceptible to alcoholism if they had a(n) \_\_\_**BIOLOGICAL**\_\_ (adoptive/biological) parent with a history of alcoholism. Boys who at age 6 are \_\_**MORE**\_\_\_\_\_ (more/less) excitable are more likely as teens to smoke, drink, and use other drugs. Genes that are more common among people predisposed to alcoholism may cause deficiencies in the brain’s \_\_**DOPAMINE**\_\_ \_\_**REWARD**\_\_\_ system.

Identify some of the psychological and social-cultural roots of drug use.

**A PSYCHOLOGICAL FACTOR IN DRUG USE IS THE FEELING THAT ONE’S LIFE IS MEANINGLESS AND LACKS DIRECTION. REGULAR USERS OF PSYCHOACTIVE DRUGS OFTEN HAVE EXPERIENCED STRESS OR FAILURE AND ARE SOMEWHAT DEPRESSED. DRUG USE OFTEN BEGINS AS A TEMPORARY WAY TO RELIEVE DEPRESSION, ANGER, ANXIETY OR INSOMNIA. A POWERFUL SOCIAL FACTOR IN DRUG USE, ESPECIALLY AMONG ADOLESCENTS, IS PEER INFLUENCE. PEERS SHAPE ATTITUDES ABOUT DRUGS, PROVIDE DRUGS, AND ESTABLISH THE SOCIAL CONTEXT FOR THEIR USE.**

1. Among teenagers, drug use \_\_**VARIES**\_\_\_ (varies/is about the same) across \_\_**CULTURAL**\_\_\_ and \_\_**ETHNIC**\_\_\_\_ groups.
2. African-American high school seniors report the \_\_**LOWEST**\_\_\_\_ (highest/lowest) rates of drug use. A major social influence on drug use is the \_\_\_**PEER**\_\_\_\_ culture.
3. State three possible channels of influence for drug prevention and treatment programs.
4. **EDUCATION ABOUT THE LONG-TERM COSTS OF A DRUG’S TEMPORARY PLEASURES**
5. **EFFORTS TO BOOST PEOPLE’S SELF-ESTEEM AND PURPOSE IN LIFE**
6. **ATTEMPTS TO “INOCULATE” YOUTH AGAINST PEER PRESSURES**

**NEAR DEATH EXPERIENCES**

**OBJECTIVE 21: Describe the near-death experience and the controversy over whether it provides evidence for a mind-body dualism.**

1. The reports of people who have had near-death experiences are very similar to the \_\_**HALLUCINATIONS**\_\_ reported by drug users. These experiences may be the result of a deficient supply of \_\_**OXYGEN**\_\_\_\_ or other insults to the brain.
2. That the mind and body are distinct entities is the position of the theorists known as \_\_\_\_**DUALISTS**\_\_\_. In contrast, the \_\_\_**MONISTS**\_\_\_ believe that the mind and body are one.